

Claims 1-46 are pending in the application. Claims 1 and 25 are independent.

Claims 21 and 41 were rejected under 35 U.S.C. §112, second paragraph, for the reasons noted at page 2 of the Office Action. Applicants respectfully traverse. Claims 20, 21, 40 and 41 have been amended to clarify the subject matter being claimed and to provide clear antecedent basis for the term "quartet". The Examiner is respectfully requested to reconsider and withdraw the rejection under 35 U.S.C. §112, second paragraph

The Examiner raised a number of prior art rejections as set out on pages 3-16 of the Office Action. All prior art rejections are traversed. Reconsideration and withdraw of all prior art rejections is respectfully requested in light of the following remarks:

The Examiner rejected claims 1, 2, 5, 10, 15-18 and 22-23 under 35 U.S.C. §102(b) as being purportedly anticipated by United States patent Re36,896 [Maarschalkerweerd]. This rejection is traversed. Reconsideration is requested in light of the following remarks.

Applicant submits that Maarschalkerweerd does not teach a module wherein each pair of radiation source assemblies is oriented such that a second axis extending through a center point of each radiation source assembly in the pair is disposed

at an angle with respect to the longitudinal axis of the support member. In fact, the axis passing through the center points of the radiation source assemblies of the Maarschalkerweerd module is co-terminus with the longitudinal axis of the support member. Notwithstanding this, Maarschalkerweerd also fails to disclose a radiation source module wherein two adjacent pairs of radiation source assemblies comprise a radiation source assembly being at a substantially uniform distance from three adjacent radiation source assemblies.

Accordingly, the Examiner is requested to reconsider and withdraw the rejection of claims 1, 2, 5, 10, 15-18 and 22-23 under 35 U.S.C. §102(b) as being purportedly anticipated by Maarschalkerweerd.

The Examiner rejected claims 1-2, 4, 7-8, 14-16, 19-21 and 45 under 35 U.S.C. §102(e) as being purportedly anticipated by United States Patent 6,231,820 [Wedekamp]. The rejection is traversed. Reconsideration is respectfully requested in light of the following remarks.

Wedekamp fails to disclose a radiation source module wherein two adjacent pairs of radiation source assemblies comprise a radiation source assembly being at a substantially uniform distance from three adjacent radiation source assemblies.

Accordingly, the Examiner is respectfully requested to reconsider and withdraw the rejection of claims 1-2, 4, 7-8, 14-

16, 19-21 and 45 under 35 U.S.C. §102(e) as being purportedly anticipated by Wedekamp.

The Examiner rejected claims 25, 27, 29-30, 34-36, 39-41 and 46 under 35 U.S.C. §102(e) as being purportedly anticipated by Wedekamp. This rejection is traversed. Reconsideration is respectfully requested in light of the following remarks.

Wedekamp does not teach a radiation source module wherein each radiation source assembly is disposed at a substantially uniform distance from three adjacent radiation source assemblies. Rather, in the Wedekamp module, the radiation source assembly disposed at the "corner" of the array is disposed at a substantial uniform distance from only two adjacent radiation source assemblies.

Accordingly, the Examiner is respectfully requested to reconsider and withdraw the rejection of claims 25, 27, 29-30, 34-36, 39-41 and 26 under 35 U.S.C. §102(e) as being purportedly anticipated by Wedekamp.

The Examiner rejected claims 3, 6, 11-13 and 24 under 35 U.S.C. §103(a) as being unpatentable over Maarschalkerweerd in view of United States patent 2,413,704 [Glatthar et al (Glatthar)]. This rejection is traversed. Reconsideration is requested in light of the following remarks.

Independent Claim 1 recites a novel, non-obvious

combination of features whereby a substantially elongate first support member has a longitudinal first axis and an array of radiation source assemblies comprising at least two pairs of radiation source assemblies connected to the first support member. The radiation source assemblies are oriented such that:

- (i) each pair of radiation source assemblies is oriented such that a second axis extending through a center point of each radiation source assembly in the pair is disposed at an angle with respect to the longitudinal axis of the support member, and
- (ii) two adjacent pairs of radiation source assemblies comprise a radiation source assembly being disposed at a substantially uniform distance from three adjacent radiation source assemblies.

This orientation of radiation source assemblies allows for adjacent placement of radiation source modules to define a larger array of radiation source assemblies wherein the distance between a radiation source assembly and its neighboring radiation source assemblies is substantially uniform.

Maarschalkerweerd, on the other hand, teaches a radiation source module which comprises a plurality of cantilevered radiation source assemblies extending from a support member. A single column of radiation source assemblies is provided per module. Thus, when the module of Maarschalkerweerd is to be used in a side-by-side arrangement

with other modules, the result is that each column of radiation source assemblies must be staggered by staggering the vertical positions of each module. In contrast, an advantage of the present radiation source module is that it may be oriented in a side-by-side arrangement with similar radiation source modules without the need to vertically stagger adjacent modules.

The shortcomings of Maarschalkerweerd in this regard are not overcome by Glatthar. In fact, the Glatthar module is not concerned with equal spacing of the lamps. When more than one Glatthar module is used, there is a clear illustration that the modules are disposed serially and not in a side-by-side arrangement. If the Glatthar modules were placed in side-by-side arrangement, the resulting overall array of radiation lamps would not be equidistant. This is disadvantageous, particularly when the fluid being treated is water and the aim is to disinfect the water by relying on an orientation of lamps to provide a uniform radiation dose delivery to the water. Moreover, the person of skill in the art would not be lead to combine these patents in the manner proposed.

For the forgoing reasons, Applicant submits that the present invention, as defined by claim 1 amended herein, distinguishes patentably over the combination of Maarschalkerweerd in view of Glatthar. The Examiner is requested to reconsider and withdraw the rejection.

The Examiner rejected claims 26, 31 and 42 under 35 U.C.S. §103(a) as being purportedly unpatentable over Wedekamp in view of Glatthar. This rejection is traversed. Reconsideration is requested.

Applicant submits that this rejection fails for the same reasons discussed above in responding to the rejection of various claims as being unpatentable over Maarschalkerweerd in view of Glatthar. Specifically, the teachings of Wedekamp and Glatthar, taken alone or in combination, do not result suggest an arrangement which confers the ability to arrange modules in a side-by-side manner to result in an overall array of radiation sources that are spaced substantially the same distance from one another. The Examiner is requested to reconsider and withdraw this prior art rejection.

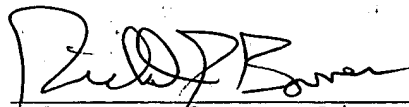
The Examiner raised a variety of other rejections under 35 U.S.C. §103(a) in respect of dependent claims. It is believed that these rejections will fall if the Examiner is persuaded to allow the independent claims for the reasons given above.

In view of the above amendments and remarks, it is believed that this application is now in condition for allowance, and a Notice thereof is respectfully requested.

Applicants' undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 625-3500. All

correspondence should continue to be directed to our address
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Respectfully submitted,



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MARKED-UP CLAIMS

1. A radiation source module for use in a fluid treatment system, the module comprising:

a substantially elongate first support member having a longitudinal first axis; and

an array of radiation source assemblies comprising at least two pairs [a first pair] of radiation source assemblies connected to [extending from] the first support member, each radiation source assembly comprising a radiation source;

wherein: (i) each [the first] pair of radiation source assemblies is oriented such that a second axis extending through a center point of each radiation source assembly in the pair is disposed at an angle with respect to the first axis, and (ii) two adjacent pairs of radiation source assemblies comprise a radiation source assembly being at a substantially uniform distance from three adjacent radiation source assemblies.

20. The radiation source module defined in claim 16, wherein at least two pairs of radiation source assemblies extend from the first support member to define a quartet of radiation source assemblies.

21. The radiation source module defined in claim 20, wherein [at least two pairs of radiation source assemblies extend from the first support member, and] single motive means is [provide] provided for [each] the quartet of radiation source assemblies.

25. A radiation source module for use in a fluid treatment system, the module comprising:

a substantially elongate first support member having a longitudinal first axis; and

a first column of radiation source assemblies connected to [extending from] the first support member, and a second column of radiation source assemblies connected to [extending from] the first support member, each radiation source assembly comprising a radiation source;

the first column of radiation source assemblies and the second column of radiation source assemblies disposed adjacent one another

wherein each radiation source assembly is disposed at a substantially uniform distance from three adjacent radiation source assemblies.

40. The radiation source module defined in claim 36, wherein at least two pairs of radiation source assemblies extend from the first support member to define a quartet of radiation source assemblies.

41. The radiation source module defined in claim 40, wherein [at least two pairs of radiation source assemblies extend from the first support member, and] single motive means is provided at least for each quartet of radiation source assemblies to define a quartet of radiation source assemblies.